

PATEL VRAJ GAURANGKUMAR

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PROFESSIONAL SUMMARY

Motivated and detail-oriented B.Tech Information Technology student (CGPA: 8.50/10) with hands-on experience in Python, machine learning, computer vision, and full-stack web development. Proven ability to design and deliver real-world, end-to-end software systems — from AI-powered driver monitoring to civic-tech platforms. Seeking a challenging role in Data Science, AI/ML, or Software Development to apply technical expertise and contribute to impactful projects.

EDUCATION

B.Tech in Information Technology

Expected May 2027

Madhuben & Bhanubhai Patel Institute of Technology (MBIT), Anand, Gujarat

Cumulative CGPA: 8.50 / 10.00 | **Semester-wise SGPA:** S1: 8.83 | S2: 8.17 | S3: 8.48 | S4: 8.30 | S5: 8.75

TECHNICAL SKILLS

Programming Languages: Python, SQL, HTML5, CSS3, JavaScript (Basic)

ML / Python Libraries: NumPy, Pandas, Matplotlib, Streamlit, Scikit-learn, MediaPipe, TensorFlow, OpenCV

Frameworks & Tools: Flask, Git, GitHub, SQLite, PostgreSQL, YOLOv11

Soft Skills: Teamwork, Communication, Problem Solving, Fast Learning

PROJECTS

Driver Drowsiness & Distraction Detection System

March 2026

Python | MediaPipe | YOLOv11 | OpenCV | Computer Vision

- Built a real-time dual-phase system using MediaPipe Face Mesh for Eye Aspect Ratio (EAR)-based drowsiness detection and head pose estimation, with auto-calibration and 8-frame smoothing to reduce false positives.
- Trained a custom YOLOv11 model on 2,004 images across 2 classes to detect phone usage; integrated independent alarm system (drowsy, distraction, phone) with CLAHE + gamma correction for low-light performance.

StockSense AI — AI-Powered Stock Analysis Chatbot

2025

Python | Flask | XGBoost | GARCH | Plotly | yfinance | github.com/vrajptl275/stocksense-ai

- Developed an AI-powered stock analysis chatbot with a WhatsApp-style UI supporting natural-language queries for any global stock; integrated RSI, MACD, Bollinger Bands, and SMA indicators for interactive Plotly charts.
- Implemented Buy/Sell recommendations using a hybrid RSI + MACD + SMA + GARCH + XGBoost model; deployed on Render.com with multi-stock comparison and a financial concept explainer module.

Anand Civic Issue Reporting System

2025

Python | Flask | JWT | SQLite/PostgreSQL | Leaflet.js | github.com/vrajptl275/anand-civic-app

- Engineered a full-stack, role-based (Citizen, Officer, Dept. Admin, Municipal Admin) complaint lifecycle management platform with GPS-based Anand city boundary validation, image uploads, and optional Gemini AI image analysis.
- Designed a 6-stage complaint workflow (pending → closed) with JWT authentication, bcrypt password hashing, rate limiting, automated notifications, and Chart.js analytics dashboards; deployed to Render.com with PostgreSQL.

Smart Attendance System

2024

Python | Flask | Face Recognition | SQLite | github.com/vrajptl275/smart-attendance

- Developed a web-based attendance management system with face recognition, real-time tracking, role-based dashboards for Admin, Teacher, and Student, and CSV/PDF report export capabilities.
- Implemented secure multi-role authentication, responsive UI, and configured Gunicorn + Render.com deployment pipeline using a custom build script for C++ face-recognition library compilation.

ACTIVITIES & HACKATHONS

CVMU Hackathon 4.0 (36-Hour)

2026

Charotar Vidya Mandal University, Gujarat

- Competed in a rigorous 36-hour university-level hackathon; delivered a fully working technical prototype under strict deadlines using rapid prototyping and agile team collaboration.

Internal College Hackathon – SIH Selection Round

2025

Madhuben & Bhanubhai Patel Institute of Technology (MBIT), Anand

- Participated in the college-level internal round for Smart India Hackathon; collaborated in a team to ideate, design, build, and present a socially impactful technical solution under competitive conditions.